

PRELIMINARY

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# CameraManSTUDIO

Visibly Better. With The New Shape Of Studio Automation.

CSS-2000-N/P

ParkerVision, the camera tracking and automation experts, introduce CameraManSTUDIO™, the first fully integrated studio automation system to give one person control over Multiple CameraMan Cameras, Digital Video Effects, Digital Audio Mixing, VCR control, Teleprompter, Character Generation and Transition Macros™ — all from one Graphical User Interface.

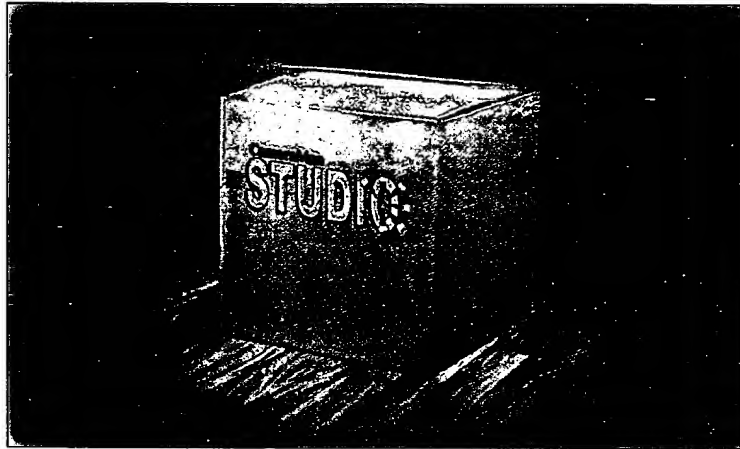
CameraManSTUDIO allows directors to manage and control a multi-camera studio environment with limited resources. The powerful Transition Macro feature allows directors to spend their pre-production time inventing new shots, then performing them with the touch of a button. CameraManSTUDIO's revolutionary studio automation capabilities adds creativity and value to:

- Independent Studios both large and small
- Corporate Production Studios
- Health Care Production Studios
- Government Production Studios
- Education Production Studios
- Religious Broadcast and Studio Productions
- Small Cable and Public Broadcast Networks
- Law Enforcement Production Studios

The integrated CameraMan camera systems also incorporate all of ParkerVision's exclusive camera-control technology with features such as autoTRACK™, Location Presets, and WhisperDRIVE Plus™.

## System Features

- Common graphical user interface for live video production including camera control, video switching and special effects, audio mixing, titling, and VCR control.
- Transition Macros used to store complex production sequences, then recall them with the click of the mouse.
- Save and recall complete studio configurations.



## Camera Control Features

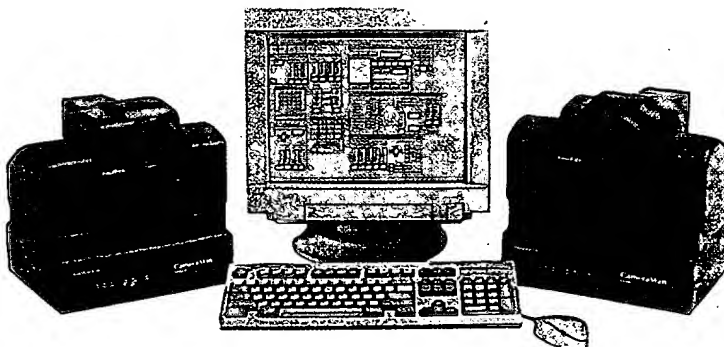
- Real-time digital camera control.
- Store and recall 125 location presets (pan, tilt, zoom, focus and image settings) per camera.
- Adjust all camera parameters including gain, paint, master pedestal, etc.
- On-screen HOT Keys to quickly store and recall autoTRACK Views™ and Location Presets.
- Virtual joystick pan and tilt gives you real-time control over each camera's movement.
- Variable speed controls for zoom, pan, tilt and presets.
- Store and recall camera shot profiles.

## Studio System Features

- NTSC or PAL for use around the world.
- Digital video effects unit.
- 8 bit 4:2:2 processing
- SHOT Profiler™
- Transition Macros.
- Digital audio mixer
- External machine control
- 8 video inputs (4 Y/C and 4 component).
- 8 audio inputs.

## Options

- Enhanced effects and chroma-keying.
- Character Generator
- CameraMan SHOT Director™ for hands-on camera control.
- CameraMan SCRIPT Viewer™ for interactive teleprompter applications.
- Y/C and component expandable.
- 1-CCD and 3-CCD CameraMan cameras.



## Why CameraManSTUDIO?

For these features available only from ParkerVision:

- Communication and studio directors can maximize their talents through the use of CameraMan's proprietary autoTRACK™ technology. With automated presenter "tracking", the director can focus efforts on other camera views and shot selections.
- All studio functions are centralized and controlled from the CameraManSTUDIO.
- CameraManSTUDIO provides real-time camera control.
- 17" Color Monitor, mouse and keyboard provide maximum control flexibility and ease-of-operation.
- Quality audio and video output for satellite, cable, public switched networks, microwave transmission — or for CD-ROM, videotape, and digital storage.

For more information, or a product demonstration, contact us at:

8493 Baymeadows Way  
Jacksonville, FL 32256-9886  
904/737-1367 or  
800/532-8034 or  
904/731-0958 fax or  
parker@seastnet.net email

**PARKERVISION®**  
Visibly Better.™

visit our website at <http://www.parkervision.com>

## Visibly Better. With The New Shape Of Studio Automation.

### Video Effects:

- Wipe Generator** ..... Vertical, horizontal, corner, diagonal, split, box, diamond, dock, and arrow.  
Border size, rotation, softness, and color control.
- DVE Wipes** ..... Arbitrary transitions, scaled, rotated, and modulated by the DVE.
- Mixing** ..... A/B wipe/mix, DVE wipe on/off, Fade-to-black
- Input effects** .....  
• Pixelation, solarization, posterization  
• Color correction  
• Rectangular border and crop with softness control  
• Full color internal pattern generator  
• Still store
- Digital Effects** .....  
• Dual source page turns/rolls, double page turns/rolls.  
• Dual source page peels, and quad peels.  
• Dual source sphere, cinema, discs, goblets.  
• Dual source push on/push off.  
• Dual source twisty splits and corner pins.  
• Quad split, multi-tilt, and ripple and flag wave effects.  
• 3D rotation with perspective.  
• Dual light sources with high-lights and low-lights.  
• Drop shadow.  
• Front/back source selection.  
• 1/16th pixel store resolution.

### Optional Video Effects:

- Background Source** ..... 3rd live input source for use as background.
- Trail Store Effects** .....  
• Drop shadow, arbitrary position, color and transparency.  
• Video drop-field/frame frozen into memory.  
• Video trail  
• Video, key texturing  
• Video, key decay  
• Video, key Sparkle  
• Independent delay control for video decay, key decay, video sparkle and key sparkle.  
• Trail modulation
- Wipes** ..... 100 additional wipe patterns including circle, heart, matrix, and random matrix.
- Keyer** ..... Two fully independently controllable chroma keyers, DVE and DSK.

### Video Inputs and Outputs:

- Video Inputs** ..... 8 composite, 4 Y/C, 4 component
- Format** ..... NTSC, PAL
- Signal** ..... Composite: BNC, 75 Ohm, 1Vpp.  
Y/C: 4-pin mini DIN, 75 Ohm, Y: 1Vpp, C: .3Vpp.  
Y, Pb, Pr: BNC, 75 Ohm, .7Vpp.
- Key Input** ..... .7Vpp, with or without .3Vpp sync BNC
- Reference Input** ..... Black Burst .3Vpp burst, .3Vpp sync.  
2 x BNC, 75 Ohm, loop-through.
- Video Outputs** ..... Program: 2 Composite: BNC, 75 Ohm, 1Vpp.  
2 Y/C: 4-pin mini DIN, 75 Ohm, Y: 1Vpp, C: 0.3Vpp.  
2 Analog Component: BNC, 75 Ohm, .7Vpp.  
Preview: RGB or Analog Component BNC, 75 Ohms .7Vpp.
- Reference Output** ..... Black Burst  
4x BNC, 75 Ohms, 1Vpp.

### Video Signal Performance:

- Standards** ..... NTSC, PAL
- Processing** ..... 8-bit 4:2:2
- Luma sampling** ..... 13.5 MHz
- PbPr sampling** ..... 6.75 MHz
- Synchronization** ..... Dual input frame synchronizers.
- Frequency Response** ..... Luma(Y): +0.5/-1dB to 5.5MHz  
Pb Pr: +0.5/-1dB to 2.75MHz  
Differential gain: less than 2%  
Differential phase: less than 2°  
Y-C delay: 20ns
- Signal-Noise Ratio** ..... Y, Pb, Pr: input: -56dB (unweighted, bandlimited)  
Composite input: -53dB (unweighted, bandlimited)

### Audio Inputs and Outputs:

- Audio Inputs** ..... 8
- Signal** ..... 1/4" TRS, Balanced +4dB, unbalanced -10dB
- Audio Outputs** ..... 8
- Signal** ..... 1/4" TRS, Balanced +4dB, unbalanced -10dB

### Audio Signal Performance:

- Frequency Response** ..... 20Hz-20kHz, +0/-0.25 dB, fs=48kHz
- THD @ 1kHz** ..... .003%
- Signal to Noise** ..... 96dB
- Crosstalk @ 1kHz** ..... -102dB
- Sampling Rates** ..... 44.1kHz & 48kHz
- Resolution** ..... 16-bits
- Converters** ..... Input: Dual 16-bit delta-sigma A/D converter, 64x oversampling.  
Output: Dual 16-bit delta-sigma D/A converter, 8x oversampling.

### VCR Control:

- Control Ports** ..... 1 source VCR and 1 record VCR.
- Signal** ..... RS232, RS422, RS485.
- Protocol** ..... Sony Betacam™

### Standard System Configurations

- CSS-2000-N/P ..... Signal Processor, Control Processor, keyboard, mouse, 17" color monitor.

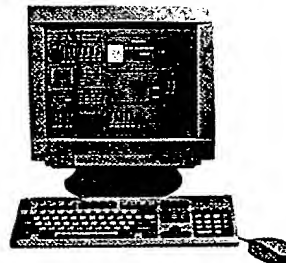
### Optional Equipment

- CPT-2000-A1N/A1P ..... General pan/tilt camera (1-CCD)
- CPC-2000-A1N/A1P ..... Presenter camera (1-CCD)
- CPT-2013-A3N/A3P ..... General pan/tilt camera (3-CCD, 13x lens)
- CPC-2013-A3N/A3P ..... Presenter camera (3-CCD, 13x lens)
- CPT-2017-A3N/A3P ..... General pan/tilt camera (3-CCD, 17x lens)
- CPC-2017-A3N/A3P ..... Presenter camera (3-CCD, 17x lens)
- EPF-2000 ..... Full signal Video Expansion Processor. Expands to a total of 8 Composite, Y/C, or component video inputs.
- EPY-2000 ..... Y/C Video Expansion Processor. Expands to a total of 8 Y/C video inputs.
- EPA-2000 ..... Audio Expansion Processor. Expands to a total of 8 audio inputs.
- EPV-2000 ..... VCR Expansion Processor. Adds an additional 3 VCR control ports.
- CRT-2021 ..... 21" Computer Monitor
- JSC-2000 ..... CameraMan SHOT Director (non-tracking)
- JSC-2100 ..... CameraMan SHOT Director (tracking)
- SVS-2010 ..... SCRIPTviewer system including processor with scripting software, 15" color monitor, keyboard, mouse, 10" flat panel display, mounting brackets.
- SVS-2012 ..... SCRIPTviewer system including processor with scripting software, 15" color monitor, keyboard, mouse, 12" flat panel display, mounting brackets.

### Additional ParkerVision Studio Products



The CameraMan SCRIPT Viewer™ is an interactive teleprompting system controlled via on-screen software, or by the talent with wireless remote control.



The CameraMan CONTROL Center™ is the ultimate camera controller, allowing one person to manipulate up to 64 cameras from one location. It is fully upgradeable to a CameraManSTUDIO.



The CameraMan SHOT Director™ allows hands-on control of up to 16 cameras from one location.